

K. William Kapp's Contribution to the Foundation and Orientation of Institutional Environmental Economics

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Masayuki Omori
Meiji University, Tokyo

Then consider the notorious problem of pollution.

Here again the economists forewarned.

The distinction that Pigou made
between private costs and social costs
was presented by him as an exception to
benevolent rule of laissez faire.

A moment's thought shows that
the exception is the rule
and the rule is the exception.

Joan Robinson (1973)

"The second crisis of economic theory"

In her Richard T. Ely Lecture,
delivered to American Economic Association
at New Orleans, December 27 1971
with J. K. Galbraith in the Chair.

in Joan Robinson (1973) Collected economic papers,
Basil Blackwell, Oxford

1. Our Purpose and Method of this Paper

1-1. The Purpose

In this paper we are looking for promising directions for the future of Institutional Environmental Economics (IEE) which will be advanced according to Kapp's lines of thought. And our inquiry might be done by deliberate understanding of Kapp's IEE from birth or foundation to its subsequent development or maturation. We will discuss some seeds of his mature theory planted in the very early writings before the Second World War, more precisely his attention to the social standards needed for human survival, safety and nutrition and his emphasizes on the democratic process of decision-making. Next we will focus upon the first version of his Social Costs Theory (SCT) published in 1950 which can be seen as a critical succession of my previous text on the Cambridge Environmental Economic Thought (Omori, 2006). Then Kapp's contribution can be regarded as Critical Welfare Economics (CWE), which is influenced by the critical theories of Frankfurt School. But this version was limited in its theory and recommended policies from the view point of Kapp's own ambition to establish a brand new political economy to be able to explore the non-monetary imbalance or disequilibrium of socio-economic phenomena. So that soon after the publication of it he had already a clear consciousness about some remaining tasks to be reexamined in a new version of SCT.

The description follows Kapp's reconsideration of Max Weber's methodology of social sciences and Kapp's acceptance of the thoughts of some contemporary institutional economists such as G. Myrdal, K. Polanyi and J. K. Galbraith. And then we regard his second version of SCT published in 1963 as an establishment of his Institutional Welfare Economics (IWE) being part of IEE. The latter IEE can be characterized by the analytical concept of Circular Cumulative Causation (CCC) in its ecological version and connected issues of Irreversibility. He pointed to Embeddedness of the Economy into Nature and Society, Dependency Effects and then the political implications of his original concept of Social Minima for human survival and environmental protection. Next we investigate the later development of Kapp's IEE during early 1970's which is a result of his involvement in the international context of environmental policy making, especially UN Conference on Human and Environment in 1972, where he demonstrated his concept of Environmental Goals, Standard and Indicators and his warnings about Environmental Dumping. And the latter was soon after established as the Polluter Pays Principle by OECD. When these international regulations were introduced in almost all

northern countries, each of them established their own environmental policies, which in some cases forced polluters to internalize prevention, engage in restoration and/or compensate those who suffered. Therefore a question on the Kapp's concept of SCs is whether the internalized costs of polluters, for example, to prevent the losses of sufferers could be categorized into SCs. For in his original definition, Kapp's SCs are shifted to the third parties and unpaid by polluters at all. However those potential costs of sufferers, whether they are paid partially by themselves or not, can not be ignored by society, then alternatively be institutionalized to become the overt costs of polluters, whether willingly or not, to prevent pollution. We could recommend that Kapp's concept of SCs might subsume the overt costs of polluters, for example, to analyze the emerging markets of pollution abatement equipments in late 1960's and 70's.

Moreover, after demonstrating the accepting or prevailing process of Kapp's SCT and its political implications in developed countries, i.e. the US, Europe and Japan, we also investigate the remaining tasks of Kapp's IEE from a recent view point of the advanced IEE of P. Söderbaum which is based on the Myrdal's and Kapp's IE. We appreciate Söderbaum's IEE for going beyond Kapp's concept of 'Institutional Man' raised as an 'Ideal Type' for analyzing the market economy and then suggesting two concepts of the 'Real Types' as not only the theoretical tools to analyze it but also to reorient today's unsustainable trends of economic world politically. One is Political Economic Organizations (PEO) with own Missions as to, for example, environmental protection, social inclusion or full employment. And another is Political Economic Persons (PEP) with own Ideological Orientations towards, for example, sustainable development, aesthetic or mental and physical health. In Söderbaum's perspective PEO and PEP might not have to realize maximum profit and utility respectively. So this kind of norm or doctrine of maximization could not be the rule but rather exception in the world of PEO and PEP, where we can find narrow and winding ways to close to the sustainable development.

1-2. Method

In this paper we try to follow the development of Kapp's theory of IE and IEE, that is a series of self-growing or self-cumulative process of his thinking about the methodology of social sciences influenced by K. Marx, M. Weber, American Pragmatists especially Th. Veblen and later the Frankfurt School, And this is accompanied with his examination of the history of economic theories and contemporary institutional economics such as Myrdal's, Polanyi's and Galbraith's.

Many earlier papers on Kapp and his SCT are mainly focusing on the mature features of him as an Institutional Economist and on his scholarly relation to some influential predecessors and contemporaries (Swaney and Evert, 1989, Heidenreich, 1998, Özveren, 2007, Berger and Elsner, 2007, Berger and Foester, 2007, Berger, 2008). Here we rather try to demonstrate the whole process of his theoretical development, which is oriented towards his interests in economic and non-economic conflicts in the real world of his time, not merely by his concerns about the significance or validity among preceding and existing economic theories themselves. I have an impression that recent papers on Kapp and his theory of IE seems so much abstract and esoteric since they are lacking any mentioning of Kapp's consistent interests in the concrete improvement of the non-monetary or real welfare of nations. We can recognize that his ultimate values are always placed on democracy and humanism, so that his concerns anytime are directed to the present economic and non-economic conditions of actual human life. Therefore he did not precisely define his IE alone or exclusively, but demonstrated it together with the actual theoretical analysis of environmental issues and the detailed political prescription for them.

In this paper we endeavor to describe the co-evolution process of his IE and IEE by considering issues of the environmental diseconomy such as pollution problems, the institutionalization of the wasteful market economy enhanced by cut-throat business competition and the attempt of internalization or re-shifting of SCs into polluting firms.

2. The First Version of SCT, as a Critique of Welfare Economics

2-1. Some Seeds of SCT in the Early Writings

Even in his dissertation on the planned economy and foreign trade, Kapp expressed his interests in basic human living conditions not only of individuals but also of society in general (Kapp, 1936, p43-44). And he mentioned not only the features of individual economic needs but also the significance of institutional, political and physiological needs of society, including the needs of safety and security (ibid.)

In another early writing by him, we can learn about his profound interests in the real welfare level of people and his fundamental attitudes towards democracy as a necessary procedure in the process of social decision-making. We can even identify in this paper the concept of 'social losses' such as "soil exhaustion, deforestation, erosion, flood, overcrowded cities, bad working conditions and its resulting effects on health" (Kapp, 1939, p772). Later in his monumental book being part of the history of IEE that is titled

'Social Costs of Private Enterprise' in 1950, the term 'social losses' becomes a synonym for the new concept of 'social costs'. So we can understand that his second stage of inquiry got started with this concept of social costs at this moment.

In addition it is important that the issues of democracy in this early paper concerning economic regulation and economic planning are mentioned soon after his depart from the Third Empire to the US in 1937. He insists that economic regulation and planning need some kinds of agreement upon 'social objectives' for majority's social ends which are formulated in a democratic way unless decided in a way of minority's dictatorship (Kapp, 1939, p773). Another profound issue in this paper is the manifestation of his real concern about the very limitations of the free market economy in the hands of the private enterprises. Even at the early stage of his inquiry he clearly concludes that "the free market economy does not supply us with any accurate criterion for measuring the social losses and disadvantages of a particular economic activity" (Kapp, 1939, pp773-773).

At the time of the world war, focusing on another side of the free market economy, Kapp reexamines the assumption of 'rational human conduct' i.e. the 'hedonistic psychology' which drives the profit (utility) maximization rule of neo-classic economics. He criticizes that psychology while referring positively to non-neoclassic theorists such as J. Robinson, Th. Veblen and J.M. Clark. Especially he points to malnutrition as example of consumers' failure to maximize their utility in advanced counties. He also argues that malnutrition is a phenomenon not limited to the period of the great depression. Then he claimed "a public policy designed to guide consumers' desires and preferences in accordance with such scientific standards of human health and efficiency, as are generally agreed upon by experts" (Kapp, 1943, p149).

We can see that almost all goals of his life-long inquiry on the SCs of market economy are present here and he has started looking for the means to illustrate the nature and significance of the concept of SCs and presenting the most adequate policies to minimize or remove them. But he goes on to develop his critique of mainstream economics by reexamining some thoughts of old and new institutional economists, critical theorists and other social and natural scientists.

2-2. Concept, Scope and Features of SCs

2-2-1 Concept of SCs

In the preface of his first version of SCT, presented in *The Social Costs of Private*

Enterprise (SCPE) published in 1950, Kapp defines the concept of SCs as below. The SCs usually tend to origin in private enterprises, whose account cannot include those costs as expenses under conditions of unregulated competition, and then are shifted to and borne by third person and community as a whole (including the 'first' and 'second' person also). In the first chapter concerning to SCs in the history of Economics, he regards SCs as not the exceptional phenomena in the free market economy as argued by Pigou, who previously paid extraordinary attention to them, but are instead 'the rule' (Kapp, 1950a, p8). J. Robinson refers to this point in her paper "The second crisis of economic theory" (Robinson, 1973) by pointing out the defect of Pigou's approaches toward environmental problems, but forgets to mention Kapp's concept of SCs. Further in the second chapter concerning to the Nature and Significance of SCs', Kapp asserts that "(t)he political history of the 150 years can be fully understood as a revolt of large masses of people against the shifting of part of social costs of production to third person or society" (Kapp, *ibid*, p16).

Next Kapp examines the history of economics from the classical to confrontations by his contemporary colleague for example some economists studying the theory of imperfect competition and points out their scarce references to the phenomena of SCs with a few exceptional cases. And Kapp appreciates some of their attention to dis-equilibrating tendencies of private enterprise and society at large on the one hand and to prolonged unemployment caused by innovation on the other hand. As to socialism-oriented economists including Marx and Engels, Kapp appreciates that they often criticize the sufferings of working class in factories and the agricultural and fishery damages caused by deforestation. Kapp naturally examines Pigou's 'Economics of Welfare' in detail and recognizes that Pigou's grasp of the SCs phenomena is comprehensive and profound. So we sometimes can find similar examples of SCs phenomena pointed out by Pigou even in Kapp's writings. But Kapp is not satisfied with Pigou's approach and the policies recommended by him (tax, subsidies, prohibition and social legislation) to resolve SCs issues adequately. Because Kapp acknowledges that Pigou's theory of the SCs is a strategy to integrate and resolve them into the framework of equilibrium economics, which always consider 'disservices' caused in the unregulated market system as remediable (*ibid*. pp37-39). Kapp also refers to Veblen a little bit when explaining the concrete cases of SCs phenomena such as animal resource depletion in his SCT, yet Kapp can not at this stage regard Veblen as the most influential institutional economist for his own methodology.

2-2-2. Scope of SCs

We can divide Kapp's illustration of the individual cases of SCs phenomena into two categories. One occurs in a point of contact of human with the nature or is caused in the production processes and circularly cumulated there. Another happens within the socio-economic process before and after the production of goods and services and in turn affects or causes repercussion upon preconditions of their own production. The former contains diseconomies which are accompanied with the impairment of workers, air and water pollution, and the premature depletion of fossil fuel. The latter contains diseconomies which are accompanied with technological change, unemployment of human and other resources, monopoly, distribution and transportation process, and research and development. In each case Kapp tries to examine the detailed features by pointing to empirical data and evidences. He here summarizes the above and confirms implications of his inquiry. And then he describes his perspective of his 'new science of political economy' which would appropriately deal with SCs and Social Benefits (SB) through Social Evaluation (SE) of them.

2-2-3 Features of each SCs

(1) SCs of Production Processes Caused by Ignoring Prevention Measures Needed

(a) Impairment of Workers

In chapter 4 of the SCPE, Kapp illustrates the impairment and occupational diseases of workers as a typical case of SCs. We may suggest that the reason why he takes it as the most important incident relates to his intention to induce a type of political solution of SCs in general from concrete cases of accidents in the US. Previously in chapter 1, he formulates his recommended policies to modify the SCs of this type by systematic application of the principle of social insurance, such as the case of Workmen's Compensation Act in the US. While in his argument the workers' losses of life and physical sufferings can not be fully compensated, the uncompensated wage losses remain considerable and small sized firms containing self-employed business owners also can not enter these insurance schemes. In this context we might have two questions about his arguments.

Firstly we can ask what categories the concerned sufferers belong to in this case. And we should understand that the injured workers are not the third person but the second person. So the third person might be their family. When the sufferers are land-owners such as farmers or self-employed artisans, they must be the first person (Swaney James

A. and Evert Martin A., 1989). However we should not think of this as his conceptual confusion. Rather in Kapp's definition of the SCs sufferers, the SCs in general are primarily the third person and society in general which could contain first and second persons.

Secondly, if employers may pay even partially for the SCs such as injured workers' medical costs by using insurance system, then these SCs, which were once shifted to sufferers as their medical expenses, could be taken account of by employers as the insurance premium. Moreover those ex post SCs might alternatively be paid by employers as ex ante prevention payments for workers' injury by transforming insurance premium into the costs of real safeguard equipments. We could regard such prevention payments of employers as a kind of SCs. But Kapp writes that they cannot be considered as SCs (Kapp, 1950a, p53). We might need any definition of the institutionalized or socially driven payments of employers by distinguishing them from the payment of the injured workers themselves. For the latter payment is usually not mediated by the social or political evaluation or decision. Kapp would be able to regard this kind of remedial or recovery costs born by sufferers themselves as monetarily transformed SCs that should be retransformed to the employers' monetary or substantive payments. So the normal form of employers' substantive costs must be their payments for workers' accident prevention equipments. We will return in this point later on.

(b) Air and Water pollution

Next example of the SCs phenomena mentioned by Kapp is air and water pollution. On air pollution Kapp understands its very technical cause that is 'incomplete combustion of fuels' being the same as A.C. Pigou's analysis of its causation. Kapp attributes the economic cause of it to a situation in which 'the returns (or saving) obtainable from their elimination are not high enough to cover the private costs involved' (Kapp, 1950a, p.68-69), while Pigou does not deny the innovators' possibility to get returns or save costs from using the new burning systems. Indeed Pigou has to attribute the real impossibility of it to the 'mere ignorance and inertia' of factory owners in his days (Pigou, *ibid.*). Then Kapp clearly points out the institutional causes of the impossibility as 'the absence of legal prohibitions and restrictions' (Kapp, p.79).

On water pollution Kapp insists that it has harmful effects not only on human health and wild life but also on the recreational values for bathers and on the land values of seaside resorts which are more indirect. As Kapp mentioned, SCs are tangible and intangible in nature. He refers to the failed international agreement by the chief marine

nations of the League of Nations on the prevention of oil pollution. And several years after the end of the last war he calls for the urgent needs of it in his SCT.

(c) Depletion of Animals, Forest and Soil

The other features of the SCs phenomena which occur in points of contacts between human and the nature, in other words, in labor or production processes, are the depletion of the renewable and the non-renewable natural resources. It is a little bit strange order that Kapp allocates chapter 7 to the destruction of animal resources, chapter 8 to the depletion of energy resources, and chapter 9 to vegetation and arable soil. In our comments we will change the order to 7, 9, and then 8.

The SCs caused by unrestricted, competitive exploitation of fur seals and whales are shifted to the third person that is other catchers containing future generations in general and the first person or the catchers themselves. That is to say it is self-exploitation which occurs in almost all utilization cases of natural 'free goods' like wild fishes and birds. And he mentions that when the efficiency of catch is growing and prevailing, the extinction is spread nationally and then internationally, so that for Kapp world wide conservation treaties which could balance the rate of capture to the replacement rate of those natural resources have to be introduced. As to fur-bearing animals in the US he refers to Veblen's cautions that SCs of this kind shifted from competitive catchers of 'business enterprise' sometimes causes hostilities within the native population and against the white population (Veblen, p168, Kapp, p101). Since the depletion of animal resources like 'free goods' tends to become 'cumulative and self-sustaining' (Kapp, p102), Kapp recommends policies of 'public regulation of fishing, hunting and trapping' through 'the enunciation and enforcement of public property rights' (ibid.).

For us as institutional economists, it is very meaningful that Kapp pays attention to the 'cumulative and self-sustaining' features of SCs phenomena occurred in renewable natural resources. Later these become the central analytical concepts of IEE such as CCC and irreversibility of ecological disruption process.

In chapter 9 Kapp describes a series of processes of SCs where destruction of the vegetative cover is caused by overgrazing and deforestation, where subsequent water and wind erosion further leads to water contamination. And then, he argues, it leads to wildlife extinction and these SCs which might be shifted to the present and the future third person. On wind erosion, he points out that it results in SCs shifted to highways, railways, buildings and so on. On forests, Kapp also mentions their multi-function such as controlling water amount, feeding wildlife, providing recreational spaces and so on.

But the private management of it cannot maintain these Social Benefits because of 'a rapid expansion of lumbering', which is forced by the competitive market struggle for producing timber to get possible maximum income (ibid.p135).

(d) Premature Depletion of Fossil Fuel

On non-renewable resources such as oil and coal, Kapp seeks the causes of the premature depletion in the scattered ownership system, the subsequent duplication of investment and the depressed prices due to rush and overproduction forced by severe market competition. The SCs in these cases can be regarded as a kind of self-exploitation by owners of these non-renewable resources and at the same time exploitation of future generations.

(2) SCs occur within the Severe Competition Process before, after and as a result of the Production

Kapp exemplifies the following socio-economic processes from the production which are accompanied with SCs phenomena caused by the technological change, unemployment of human and other resources, monopoly, distribution and transportation, and research and development. In general these can be formulated as cases of inertia or the institutionalization of the wasteful material and human resources such as duplication or excess capacity and idle labor, which involve mainly subsequent monetary losses or expenses of the sufferers now and in the future. Further some of these losses may have repercussion to the points of contacts between human and the nature, in other words labor or production process, and might enhance and accumulate their negative effects.

(a) SCs of Technological Change

Like some classical economists such as Malthus, Sismondi and many socialists Kapp points out that the introduction of technical improvements usually causes capital losses of other companies i.e. followers and losers in the same industries and the subsequent unemployment of their workers who have to pay their costs for moving, training and job hunting by themselves and their family temporally. The worker's old fashioned but important skills or human capital might be made useless and abandoned.

(b) SCs of Unemployment and idle Resources

Long-term unemployment in the periods of depression also causes negative impacts which are SCs not only for the laborers themselves but also their families and

communities. And it also means the enforced idleness or obsolescence of productive fixed capital and the decreased utilization rate of productive materials all over the countries.

(c) SCs of Monopoly

Kapp mentions properly the exploiting features of SCs, which appear in the monopolistic economic system and are shifted onto consumers in general. On the one hand monopolistic production aims at the maximum profit through higher prices by reducing supply or operational rate, while on the other hand it may economize the use of exhaustible resources by avoiding overexploitation and by conserving them for purposes of long-term profit maximization. However “plundering of the consumers has taken the form of a degradation of the quality of consumer’s goods in the interest of a quicker and repeated turnover” (p.177) and it has been enhanced by many aggressive sales promotion activities(p178).

(d) SCs of Distribution

As to the SCs of the distributional process, Kapp refers to two kinds of them. The first one is material and human losses from ‘the duplication of retail outlets’ (p182). And the second is ‘the social loss involved in advertising and related efforts of sales promotion’ (ibid.). As Marshall and Pigou did, Kapp divides advertisement activities into two categories. One can enhance consumers’ knowledge of goods and services and the other is combative promotions among oligopolistic firms to shift and to bear their costs of those onto consumers as SCs (ibid, p187-191).

(e) SCs of Transportation

Concerning SCs of transportation, Kapp criticizes the duplication of the capital and costs for their construction and operation caused by the competitive system which can generate SCs. They are shifted onto and born by the huge number of users. He suggests that ‘to prevent monopolistic exploitation of consumers through excessive and discrimination charge’ (ibid, p200), the introduction of a system of public regulation of transportation is a better policy choice. Then he recommends ‘collective ownership or nationalization’ of it (p206), which at that time was already introduced some developed countries. However, in the next version of SCT in 1963 he withdraws this recommendation.

(f) SCs of Research and Development

Kapp writes under the title of 'the frustration of science' as to the institutionalization of wasting human and material resources which are input into the R&D activities. These R&D are pursued by various governmental or public agents, universities and private research institutions after the Second World War. He mentions that while the public agents are generous, they tend to specialize in the 'pure sciences' and not directed to 'the immediate solution of practical problems' (ibid, p210). Private or industrial institutions have to keep secrets extremely long in considering 'competition and profit' and there is not 'any coordination between the scientific work of research laboratories of different business units' (p212). Therefore the duplication of human and material resources that is SCs, which are accompanied with those R&D activities, often occurs. Further he points out that there are some factors that delay the diffusion of the outcome of R&D. As examples he points to innovators' disability to use the knowledge acquired, introducers' consideration to avoid obsolescence of existing equipments, and the well established patent system in those inefficient 'mixed system of research'(p215).

(g) Other SCs

Out of the above context, Kapp additionally points to other types of SCs, which are caused by the disorderly utilized private lands and anarchy industrial location in urban districts that occurs 'robbing the neighbors of their light', 'destroying the beauty of the landscape' and 'expanding urban facilities such as water reservoir, sewage system and schools' (Kapp, 1950a,p225). Then his exemplification suggests that these problems pointing in the direction of 'zoning and planning ordinance' (ibid. p224).

(3) Kapp's Solution for SCs Problems: a new Science of Political Economy

Kapp suggests some general implications of his analysis of SCs phenomena for example that they occur within the framework of the institutionalized production practices and of the competitive socio-economic processes before, after or as a result of production. He confirms a portion of SCs may read to the monetary expenditures for suffering private individuals or public authorities, which will be paid to prevent and/or to recover their losses. While another one is non-tangible and may remain for example the impairment of human health and esthetic or recreational values which cannot be measured in markets. Kapp points out that the modern economic models of cost-price analysis, except Pigou's, lack the concept of SCs because of their "implicit assumption that the economic can be separated from the so-called non-economic" (ibid. p238). Further he recognizes that this separation is corresponding to the entrepreneurial tacit attitudes

towards their total costs of production and their calculation or measurement of benefit by ignoring SCs, especially non-monetary features of SCs. Therefore he declares that economics has to return to philosophy and abandon equilibrium analysis and then restart with 'the recognition of strong and cumulative tendencies toward disorder and "disequilibrium" which are necessarily enhanced under conditions of competition' (ibid. p245).

Finally, Kapp suggests that the aim of his new science of political economy is "to provide the basis for an impartial and critical comprehension and interpretation of socio-economic reality" (p246). Further he suggests that the task is "the exploration of the repercussions of various measures of public control and economic regulation" and then the provision of "tentative criteria for the formulation of public policy" (ibid. p247). Therefore he expects that in his project the measurability in terms of exchange value would not be the criterion of the new economic science where 'the intrinsic connection and interpenetration of the economic and non-economic' would not be as 'the subject matter' (ibid. p249). However we can not imagine that his project was 'designed to take account of social costs and social revenues' (p254) in its totality. For in this first version of SCT there remain immature concepts of 'cumulative tendencies' not well defined in their ecological background. An important missing link of key concepts such as 'social minima' and 'irreversibility' is lacking. Still, Kapp at this stage remains a vital critical theorist against welfare economics or a critical welfare economist. He is not yet an institutional economist or institutional environmental economist in a complete sense.

2-2. Some Significant Influences from other Theorists to the first version of SCT

We can point to many economists and philosophers who have influenced this first version of Kapp's SCT. And we may also divide them into three categories. The first is a group of theorists which became important for Kapp to revise his masterpiece, the second is still important but not so much for his revising works and the third is always significant for him to develop his economic thought fundamentally.

Veblen and Myrdal belong to the first group of theorists, and the reason why they do so will be demonstrated in the next chapter. J.M Clark and Schumpeter belong to the second. Clarks is an institutional economist who used a 'social overhead costs' concept which inspired Kapp's concept of SCs while Shumpeter is for Kapp the most suggestive theorist of disequilibrium and dynamics caused by innovation. Further we may add in this category A.N. Whitehead as a philosopher who inspired Kapp to "a return to philosophy" by Whitehead's suggestion that some kinds of, so to say, 'paradigm shift' are

needed in science in general based on its own philosophical foundations. However this does not mean that Kapp tries to return to the philosophy of Whitehead.

Rather Kapp returns to his philosophical background of critical theory, especially the one formulated by Max Horkheimer. We think Horkheimer belongs to the third category and can observe that Horkheimer's paper titled 'The Social Function of Philosophy' written in 1939 is quoted by Kapp (Kapp, 1950a, p247). This is suggestive for Kapp to get a promising direction to integrate social sciences, on which his own economics can be developed with his SCT. Horkheimer's paper is also related to Kapp's following statement that "the aim of economic science can only be to provide the basis for an impartial and critical comprehension and interpretation of socio-economic reality" (ibid.p246). And Kapp continues to argue that "(s)uch comprehension requires above all that the basic concepts and categories of economic science be formulated in a manner which transcends the market economy" (ibid.) In fact Horkheimer insists in his paper that "(p)hilosophy has set itself against mere tradition and resignation in decisive problems of existence, and it has shouldered the unpleasant task of throwing the light of consciousness even upon those human relations and modes of reaction which have become so deeply rooted that they seem natural, immutable and eternal" (Horkheimer, 1939, p325-326). Further Horkheimer cautions that 'neither the prevailing way of thinking nor the prevailing mores should be accepted by custom and practiced uncritically' (ibid.p325). And afterwards wrote a book *Eclipse of Reason* in 1947 and named these trends as 'instrumentalized' ideas (Horkheimer 1949, p21). So Kapp follows the thesis of Horkheimer that 'thought transcends the prevailing forms of scientific activities, and thus transcends the horizon of contemporary society' (Horkheimer, 1939, p.329). Then Kapp tries to apply these thought to the contemporary economics of equilibrium and write 'economic science must overcome "the horizon of contemporary societies"' (Kapp, 1950a, p246-247).

Kapp owes his methodological framework also to Max Weber's. Already in this first version he refers to Weber's famous distinction between the 'economic' and the 'non-economic' (Weber, 1904 [1968] , pp.161-164). And he criticizes that neoclassical economics restricts their analytical domain to the former monetary world and abandons the latter. Thus Kapp insists that the very 'political economy' which can deal appropriately with the phenomena of SCs and social returns (SRs) must be based on the intrinsic or intimate interrelationship between the 'economic' and the 'non-economic' (Kapp, 1950a, pp.11-12). Further he has to reexamine Weber's other famous methodological distinction between 'formal rationality' and 'substantive rationality' (Weber, 1922 [1956] pp44-45) and Weber's concept of 'ideal types' towards the revision of

his SCT.

2-3. Achievements and Limitations of the First Version of SCT

2-3-1 Achievements

The primary achievement of this first version of SCT is almost like a Copernican Revolution of modern economics done by Kapp, which regards SCs phenomena not as the exception but the rule of market economy (Kapp, 1950a, p8). He also suggests that this transformation must be accompanied with the fundamental critique against the prevailing economics of equilibrium and with the investigation of 'the cumulative and self-sustaining tendencies' of economic phenomena (ibid.p11). And he predicts the revitalization of political economy of the real world which necessarily is needed to examine SCs phenomena. In practical terms he proposes the establishment of the evaluating systems of SCs and SRs and the introduction of some kinds of social regulations or social planning such as social insurance system similar to Workmen's Compensation Act of the US into other kinds of SCs phenomena.

2-3-2 Limitations noticed and not yet

At the first stage of his SCT there remain other theoretical and practical limitations, for example, his ambiguous attitudes towards Max Weber's methodology of social sciences. Then there also remains the consequent obscure evaluation of the positivistic and formalistic definition of economics by Lionel Robbins, which seems to be based on Weber's. However we can consider these issues as almost noticed by himself from the view point of the achievement of his second version and its preparatory inquiries, in which the ambiguity is clearly got over. Therefore we may treat them in the beginning of the next chapter.

Among the unconscious limitations of his investigation Kapp surely mentions Marshall's theory only a few times in the first version. But he does not refer to Marshall's proposed environmental policies to conserve workers' living conditions or amenities, which contain the recommendation of introducing the 'fresh air rate' for the recovery of green open space, extinguished by rapid economic development of cities. We can discover even Marshall's other environmental policies to regulate the buildings' coverage ratio and their heights by local authorities and to introduce the zoning plans also by them, which would divide the city area to be developed and the rural area as not

to be. Had Kapp more deliberately examined Marshall's environmental economic thought and his prescriptions for SCs phenomena, then he would have understood profoundly the substantive features of environmental and developmental issues even earlier and might integrate or reflect upon them into the first version of his SCT, especially in the part of 'Note on other social costs' of chapter 15.

Besides, Kapp criticizes Pigou's proposals to introduce the environmental taxes and subsidies in general. However he does not examine precisely Pigou's other environmental policy recommendations to restrict, for example, the fertility-degrading practices of agriculture by concluding voluntary agreements between landowners and tenants backed by the soil conservation laws. Moreover Kapp knows Pigou's important but insufficient attentions on the possible innovation of 'smoke-preventing appliances' 'would make to efficiency of fuel' and 'be directly profitable to the users' (Pigou, p184). Pigou attributes the causes to prevent the adoption of these devices to 'mere ignorance and inertia' of factories' owners (ibid.). So we assume that this issue is so problematic for Kapp's discussion on the SCs. Because as much as the innovators or introducers could significantly economize fuel consumption and prevent smoke at the same time, the SCs of this kind are merely temporal phenomena and could disappear immediately and voluntarily without any direct regulations of air pollution or any emission taxes and/or emission reducing subsidies. Later in 1979 environmental management researcher Michael Royston points out that in addition to the fuel efficiency increase caused by pollution prevention, the marketable innovated know-how and patents of those devices could be so profitable. Thus many anti-pollution types of equipment were invented and traded, historically after the gradual enforcement of the governmental pollution regulations from late 1960's in almost all developed countries (Royston, 1979, p51, p68). However this could be understood that SCs phenomena might be resolved in the competitive market system even if there were not any kinds of regulations. Pigou and Kapp unfortunately could not discover empirical facts of the above extremely expanded hypothesis of Royston's 'Pollution Prevention Pays' assumption. Afterward Kapp often returns to this problematic issue and repeatedly neglects possibilities of 'pollution prevention pays' without any direct regulations by authorities.

3. The Second Version of SCT as the Institutional Welfare Economics (IWE) or Substantive Welfare Economics (SWE) containing Institutional Environmental Economics (IEE)

3-1 Preparation for the Second Version of SCT

Kapp wrote the preface of the first version of his SCPE in October 1948 and his article titled 'Political Economy and Psychology: The Survival of Hedonism and the Research Tasks of the Future' was issued in 1950. We guess he had prepared to write this paper just after finishing the first version, because he might think that he would have to reexamine the history of economic thought and the methodology of economics immediately to overcome and complement the imperfect parts or limitations of his SCT. In this paper Kapp criticizes the neoclassic theory and their psychological bases in hedonistic utilitarianism typified by Marshall's, Sidgwick's and Jevons'. And their implicit and explicit assumption that the goal of economic behavior is income (profit and utility) maximization could not be justified as the ultimate motivation of human actions by Kapp. He instead exemplifies 'other driving force activities such as tradition and conventions, instincts, emotionally determined loyalties, religious attitudes and tacit belief in a validity of certain ultimate values' (Kapp, 1950b, p296). Further he points out that Weber recognized that religion or religious conviction can also be ultimate motive of human economic activities. Then Kapp suggests that Weber's apparently ambiguous attitudes towards the ultimate values, which motivate human economic activities, do not properly correlate with Weber's own clear distinction between 'the formal rationality' and 'the substantive rationality'. Therefore Kapp expresses his belief that '(e)conomic behavio(u)r (whether individual or group) is also directed toward security' (ibid). In other words, in our behavior 'we are guided at any given time by a concern for security, self-esteem and integration with the group and culture of which we are a part' (ibid. p.297). Here we can remember that Kapp was in his early writings very interested in the institutional, political and physiological needs of society including safety and security.

At this point we can also recognize that Kapp is influenced by Karl Polanyi's reference to the man's embeddedness in society, but at this stage there is yet no reference to embeddedness in nature. And in the next paper on 'Economics and the Behavioral Sciences' issued in 1954, Kapp clearly recognized men's embeddeness also in nature, which was closely related to his break through understanding of substantive view point of economics as an empirical science (Kapp, 1954, p207). For 'empirical-substantive economics' (ibid.216) the sociological theory of organization such as, on the one hand, labor unions, farm organizations, and consumer's groups which have countervailing power (see Galbraith, 1952). On the other hand, different types of corporate structure and employer organization, which have centralized or decentralized decision-making process, are needed to take account of (ibid. p215-217).

Moreover in the former 1950's paper on economic psychology Kapp repeatedly appreciates J.M. Keynes' psychosocial bases of economics compared with the neo-classical theorists', for example, by mentioning Keynes' attention to the investors' 'animal spirits', 'fundamental psychological law' and co-called 'Keynesian consumption function' (Kapp 1950b, pp300-303). But Kapp seems not to adequately appreciate Keynes' significant statement on the tendencies of modern big corporations, which must seek to stabilize their organization and reputation rather than to maximize their profit for investors or stockholders mentioned in "End of Laissez-Fair" (Keynes, 1926, p289). Just before the publication of the second version of his SCT, Kapp issued a corpus of his preparation for it, titled 'Toward a Science of Man in Society' (Kapp, 1961), which contained a paper 'Approach to the Integration of Social Inquiry' issued in 1957. This book was constructed in three parts. The first investigates the process and causes of the compartmentalization of social knowledge and insists on the need to integrate them. The second analyzes the mutual relationship of the inanimate matter, the living organizations and human society. And then the third examines the human connection with their culture which means 'integrating conceptual frameworks' for social sciences (ibid. x iv).

From our point of view to trace the development of Kapp's SCT, the most important features of this book are his attention to Myrdal's concept of 'circular or cumulative causation' (CCC), which 'emphasizes precisely the interaction of economic with the whole range of non-economic factors and the social system as a whole' (ibid.p187). Kapp recognizes that the implications of this concept are superior to 'the still highly mechanical models of the multiplier and the accelerator of Keynesian and modern business-cycle analysis' (ibid.). While the former, the concept of CCC, focuses on the mutual relationship of the inanimate matter, the living organizations and human society, the latter, Keynesian's tools, can be applied only to the pecuniary phases of social systems.

Another significant development of Kapp's SCT is the discovery of his own methodological standpoint of socio-economic investigation that is 'real types', which removes apparently ambivalent aspect of Weber's concept of 'ideal types'. On the one hand this concept is vulgarly interpreted by the positivists such as Robbins to be constructed as 'purely fictitious (ideal) models', on the other hand it must be very 'ideal' but also be 'empirical in origin and abstractions from reality' (ibid. p195). Eventually Kapp comes to conclude that 'the substantive problem of man's interaction with and dependence on this natural and cultural environment must be the point of departure and the goal of integrated social inquiry' (ibid.p198)

3-2. Significant Methodological Points of Revision of SCT in the Second Version

(1) Discovery of the Key Concepts: Social Minima and CCC

In the substantial second version of SCT, in the book titled *The Social Costs of Business Enterprise* (SCBE), Kapp suggests that his theoretical standpoint is now transformed from Critical Welfare Economics, as defined above, to Institutional Economics, characterized by using Veblen's term of 'business enterprise'. And he introduces the new key concepts of 'Social Minima' and 'CCC'.

(a) Social Minima

In the first version of SCT, Kapp writes that 'the issues raised by the concept of "social value" and "social evaluation" belong to the most important unresolved problems of economic science' (Kapp, 1950, p22). And in the concluding part of it he 'merely hints at the general direction of thought, in which a solution of these problems might be found,' '(w)ithout presuming to offer a definite solution' (ibid.) Certainly he refers to 'the enforcement of minimum standards of health and efficiency' concerning the gradual but partial internalization of SCs from sufferers and society at large into causers' budgets in the first version (ibid. p16). However the concept of 'social minima' is not explicitly defined as the objective standards or measurements of SCs in that text. He writes now in the second that 'as in all matters of social evaluation, we would be on safer grounds if we could rely on objective standards of social minima and measure social costs in term shortfalls or deficiencies from such minima' (Kapp, 1963, p23). We should understand that social minima must not be monetary, but substantive as long as we follow his preparatory inquiry for this new version.

Indeed, in this new version Kapp firstly exemplifies air pollution, because this phenomenon 'is rapidly becoming one of the major sources of social losses in the industrial world' (ibid.p47). And he takes account of man's 'unalienable right to clean and uncontaminated air', which has to be observed by any 'standards of maximum acceptable concentration of pollutants in the atmosphere' that is set politically (ibid.p72). Further in the next chapter he also points out that water pollution 'has many of the characteristics of a circular process in which several factors interact and push in the same direction' (ibid.p75). And he mentions social standards of water contamination such as the 'biochemical oxygen-demand' (ibid.p84).

(b) Circular Cumulative Causation (CCC)

In three pages, Kapp explains CCC of SCs phenomena into the new version. For Kapp the acceptance of CCC as 'the main hypothesis for the study of social relations and economic processes in particular' '(i)n contrast to neoclassical analysis' (ibid.p23) means the introduction of Veblen's analytical framework for 'the cultural evolution and economic processes' rather than the business cycles models with equilibrating functions (ibid.p25). The reason why Kapp applies CCC to his SCT is that social processes like the appearances of the SCs phenomena are 'marked by the interaction of several variables both "economic" and "non(-)economic" which in their combined effects move the system away from a position of balance or equilibrium'(ibid.p25). And he also refers to Myrdal's understanding of CCC, as self-enforcement of the change process of things in the same direction by overcoming countervailing powers (ibid.).

Indeed, Kapp points out that the causes of air pollution tends to 'interact in a cumulative manner (ibid.p47) 'and that water pollution also 'has many of the characteristics of a circular process in which several factors interact and push in the same direction'(ibid.p75).

(c) Ecological Balance, Critical Zone and Irreversibility

After investigating air and water pollution, Kapp refers to the other renewable but vital resources such as forests and wildlife including fishes from the viewpoint of 'ecological balance' for their reproduction or survival. Then he uses the term of 'critical zone' and 'a safe minimum limits' 'beyond which any further increase in the rate of utilization of renewable resource sets into motion a cumulative process of irreversible depletion and extinction'(ibid.p95). In his understanding '(a)n irreversible depletion limits and channels development toward specialization rather than diversification' (ibid.p97). Further he concludes that '(c)ompared with these potential social costs likely to be caused by an economically irreversible depletion, the actual costs in avoiding these social costs are relatively small' (ibid.p97). These three important concepts of Kapp's SCT are eventually integrated into the revised analysis of not only renewable resources but also non-renewable ones as will be explained below.

(d) Effects of the Different Institutional Arrangements on the Resource Utilization

Kapp asserts firstly that land utilization system either of free access or in common 'was closely regulated by habitats and institutional restrictions enforced by custom' (ibid.p99). But as to institutional arrangements of land usage such as short-term tenancy contracts, farm credit terms and taxation system influence the rate of utilization of it. Not only explicitly institutionalized socio-economic elements like 'increasing population pressure, low income and fluctuating prices of the products, but also the high rate of time preference'(ibid.p100) have any tendencies to deplete renewable resources rapidly. As same as time preference, there are other kinds of habitats and customs which are internalized into human mind-set in the market economy. Therefore 'social minimum standards may be said to be an organizing principle for the understanding of socio-economic processes under different institutional arrangements' (ibid.p114).

3-3. Other Significant Revised Points in Exemplifying the SCs Phenomena

3-3-1. SCs occurs within the Production Process by Ignoring of Prevention Measures Needed

On air pollution abatement Kapp asserts in this new version in 1963 that in the US '(a)verage costs per capita which 10 years ago still about 10 dollars per person are now estimated to be nearer to \$65' (ibid.p66). It is very important and suggestive for us that there might be so scarce direct regulation measures in local and national levels in all developed countries that the payment or expenditure for SCs had been done by only sufferers' side but polluters'. Further we can assume that there might be no incentives or disincentives offered by public authorities to make pollution prevention pay in those days. From the above descriptions and its relating context unfortunately we can not be well informed by Kapp about what kinds of abatement payment had to be born by sufferers of pollution precisely. This point will be further discussed below.

In addition it is also suggestive that Kapp comments that the polluters are not only private industries but also private consumers and automobiles in this stage of affluent society in the US (ibid.p66-67). At the same time he also pays attention to the new water pollution phenomena caused by 'the synthetic chemicals which are increasingly used as germ killers, insecticide, herbicide and other solvents including detergents' (ibid.p82). Further he timely and properly points out an important event to establish '(t)he maximum permissible concentration (MPC) of radium in the domestic water supply' in US, which 'is 4.0 micro micro-gram per liter' (ibid.p80).

3-3-2. SCs occur within the Socio-Economic Process of Cutthroat Competition before and after Production.

In the new version of SCT Kapp more precisely investigates the phenomena of 'the internalization of the waste' or 'the wasteful utilization of human and artificial resources' in the extremely competitive market economy compared with the previous version. Especially chapter 12 of the new version which is titled 'the social costs of cut-throat competition, planned obsolescence and sales promotion' is based on 'Veblen's earlier discussion of "sabotage" and "the conscientious withdrawal of efficiency in modern industry"' (ibid.p224), (Veblen, 1933, p20). Moreover according to Veblen's emphasis on the destructive impact of excessive sales promotion by influencing the human mental health and personality, Kapp criticizes SCs caused by the professional sales promoters who apply psychology aiming at 'the transformation of consumers into customers for special commodities' (Kapp, p239). The doctrine of Consumers' Sovereignty which could maximize their utility survives only in the theory of economists but loses its validity in the real world which is described in 'The Affluent Society' published in 1958, in which J.K. Galbraith characterized these facts of 'dependence effect' in detail. At the same time, the producers' moral to maximize their profit is relaxed on the other hand. And then Kapp concludes that Max Weber's discovery of the Protestant ethics appears to be out of place already (ibid. p243).

3-3-3. the Most Significant Methodological Development in the Second Version

In the first version of SCT Kapp reluctantly approves Robbins' formal definition of economics implying a study of human behavior as 'a relationship between ends and scarce means'. However, Kapp is skeptical to Robbins' social philosophy and his subsequent exclusion of the problems of governmental decisions about 'social choice and social evaluations of different alternatives' from economic analysis (Kapp 1950. p252). Even in the first version, we can understand that Kapp criticizes Robbins' attitudes towards economics which confine 'its analysis to alternatives measurable in terms of market value (ibid.p252) i.e. 'the economic', while excluding 'the non-economic'. However in this part Kapp is not clear enough to state his own alternative definition of economic science, so that his attitudes still sound ambiguous.

The second version can eventually move this obscurity by introducing institutionalism and the substantive viewpoint which accounts for not only 'the

economic', but also 'the non-economic' altogether. Kapp suggests his own economics based on the A. G. Gruchy's institutional approach as the following.

A substantive definition of the nature of the economic problem would have to view its features within the context of changing (i.e. socio-cultural) relations where scarce means are adapted into individual as well as public needs and requirements and where the latter are in turn selected, or adapted to socially available resources. Such a substantive definition of the scope of economics is no doubt based on the fact that economists are concerned primarily with problems of social action and social choice rather than with individual behavior seen as a formal relationship between (individual) ends and scarce means under condition of scarcity (ibid.p288). Further Kapp dismisses the formalist way of thinking that ends are beforehand given arguing that they are contestable in the same way as means. As far as his economics is substantive and even objectifies social action and social choice, economists have to cooperate with 'technical experts in engineering, public health and other field of technology in order to identify and define SCs and SBs which the market system tends to ignore (ibid. p289).

3-4 Remaining Tasks of Kapp's IWE or ISE and subsequent IEE

3-4-1. Excessiveness of Disutility in the Pre- and Post- Production and its Repercussions on Production

In the first and second version of SCT, Kapp certainly deals with SCs such as the duplication of human and man-made resources, which are prevailing before and after production in the competitive market economy. Especially Kapp takes account of the temporal and often continuing unemployment as Malthus and Marx did but contrary to J. A. Hobson and Keynes he does not mention the excessiveness of products, capital and monetary resources in the monopolistic developed countries. As seen in the above section, Kapp's definition of economic science or his system of IWE still remains in the realm of scarcity. However, in his brand-new theory of IEE he indeed deals with excessiveness of pollutants and overexploitation of exhaustive and non-exhaustive natural resources. Further he points to the sales-promotion-driven over-consumption, which in turn supports mass production and over production in the actual affluent societies. Therefore he could assert that mass dumping and scrapping of used consumers' and producers' goods occur in the US even in the early 1960's. However in Kapp's SCT there is a missing link between the SCs caused in the production process (as the disturbance of human and other natural balance of ecology) and the SCs caused

after and before the production process (as the duplication or excessiveness of human and artificial resources). We may point out it is the 'disutility' of waste or used materials that is enhanced in the affluent society and returned to distort the ecological balance beyond its 'critical zone' in the production processes. Regarding the second version as a system of IWE, this is a remaining task for Kapp to be explored afterward.

3-4-2. Reexamination of the Concept of SCs in itself

In our previous section we referred to Kapp's attention to the increasing payment for pollution abatement by sufferers in the US (ibid. p66), while he does not fully investigate different kinds or forms of payment derived from substantive damages on the sufferers' side. He also does not refer to any payment concerning these damages, for example, voluntary or enforced compensation for the sufferers' recovery and compensation for them paid by polluters. But now we can easily assume those polluters' payments by remembering our recent experiences of air pollution cases of sulfur oxides contamination and its consequent acid rain which affect farmers and households. The acidified farm lands have to be neutralized by farmer's own labor with slaked lime substantively and human suffering such as asthma has to be prevented by removal or cured in hospitals. Of course, the costs of these counter measures for restoration, preventions and remediation taken by sufferers themselves should be transformed into monetary terms and eventually would be charged to polluters in the name of compensation.

On polluters' or causers' side Kapp also suggests that the cases of the above mentioned 'Pollution Prevention Pays' (Royston, 1979) could never occur when "discounted private return (or saving) obtainable from the prevention of technological inefficiency and social costs may not be high enough to compensate for private costs of necessary abatement measures", though "air pollution is a sign of inefficient and incomplete combustion of coal and oil" (ibid. p70). He concludes that '(t)he need to conserve air may make it necessary to contemplate the elaboration and utilization of objective standards in the formulation to local policies, i.e. standards of maximum acceptable concentration (M.A.C.) of pollutants in the atmosphere' (ibid. p72). Therefore in the second version Kapp also does not refer enough to different kinds or forms of substantive counter measurements against pollution and their consequent transformed forms of payment in monetary terms. However just before or simultaneously with the publication of the second version he writes a paper titled 'Social Costs and Social Benefits' (1963b) and suggests kinds or forms of the prospective polluters' payment for SCs based on the

quantification of them. He writes that SCs can be measured partially by the outlays or the expenses of polluting business enterprises to remedy the damage for example 'extra costs of cleaning buildings exposed to polluted air' (Kapp 1963-b, p 187). And he suggests that SCs can be calculated by 'the costs involved in the installation of proper filters or waste treatment equipment' that 'business enterprise would have to incur in order to eliminate social costs' (ibid. p 187-188). Therefore Kapp defines the concept of SCs and SBs concretely such as the followings 'that an investment of \$100,000 required for the installation of smoke filtration and pollution abatement equipment would have the effect of eliminating social loss to the extent of \$200,000 we will have quantified social costs as well as social benefits' (ibid. p 188).

When we can assume that the prospective outlays for SCs might be paid or shared by both sides i.e. sufferers and polluters, then we could grasp them as a whole, whether there might remain some shifted and unpaid substantive SCs in the sufferers' side or not. For this purpose Kapp's concept of SCs might be extended to include not only the unpaid substantive or monetarily estimated SCs which would be born by sufferers but also to cover substantive or pecuniary SCs calculated, transformed and born by polluters. They usually have to be driven through institutional arrangements established. If this kind of more detailed formulation of SCs with different variants might be done we could firstly define the original concept of SCs as 'the shifted and unpaid substantive and mere monetarily estimated SCs'. If so, secondly the expenses born by sufferers should be named as 'the potential, untransformed or unmediated SCs' for self-protection or self-mitigation. Then thirdly, the outlays should be transformed and born by polluters such as compensation-, recovery- and prevention payments driven through established institutional arrangements, which might be named as 'the overt or mediated SCs'. However it would be occurred that any policy measures could not fully substitute the costs of sufferers to the payments of the polluters, which were internalized or driven to recover and/or compensate the damage of sufferers. In these cases there would remain substantive or monetary SCs of sufferers which eventually have to be compensated by societies. Therefore we could call those public compensation 'the monetarily re-shifted SCs to taxpayers or society at large'. Of course even in these cases there may remain the originally shifted and unpaid SCs substantively.

Here we have reached the above two problematic issues about Kapp's SCT. The first one is relating to his IWE and needs to apply his CCC theory of SCs to the totality of the socio-economic reproduction system composed of pre-production, production and post-production. The second one suggests that his concept of SCs should be extended and reformulated more precisely to cover the payments on both sufferers' and polluters'

sides. As mentioned above these have mutual and offsetting relations. We think Kapp also recognizes these problematic issues. Next we can describe the development of his IWE or IE and IEE after 1963.

4. The Development of Kapp's IE and IEE after 1963 to 1976

4-1. Evolution of his IE from IWE

After the publication of the second version of SCT, Kapp definitely used the expression of 'institutional or social economics' in the article titled 'Social Economics and Social Welfare Minima' (Kapp, 1965c). In this paper he repeatedly explains the importance of the theory of CCC and of minimum indicators of substantive welfare. Soon after its publication we can find more direct references to the institutionalism as his own methodology in a paper titled 'In Defense of Institutional Economics' (Kapp, 1968) where he compares the definition of institutional economics by Gruchy with Robbins' neoclassical economics and contrasts the former's agent of economic activities such as 'institutional man' with the latter's 'homo oeconomicus' (ibid.p2). Further he argues that the concept of institution is 'to be understood rather as referring to stabilized form of behavior, habits of thought and conduct including group habits and behavior patterns which have been developed in, and are taken over from the past and enduring in the present' (ibid. p3). However he writes against too simple ideas of a scientific field. 'I believe that definitions of the nature and scope of a particular field of study acquire their full meaning and precision only as our acquaintance with the problems under study expands' (ibid.). It could be assumed that Kapp's IE would have to be co-evolved only together with his IEE.

A recent investigation on Kapp's overall inquiries by Regine Heidenreich reconstructs the Kapp's unpublished manuscripts concerning to 'The Foundations of Institutional Economics' written in 1969 (Heidenreich, 1994). It suggests that Kapp, just after the above mentioned 1968 paper, prepares to establish his own system of IE concomitant with his own system of the IEE. And the former contains the history and methodology of IE, institutionalist theory of capital, technology and business enterprise, and the theory of economic domination⁽¹⁾. Therefore we can assume that one of his last papers titled 'The Nature and Significance of Institutional Economics' (Kapp, 1976b) that was written just before his sudden death contains some important parts of the most developed features of his IE leaving his previous IWE behind.

In this article Kapp also criticizes the definition of economics by neoclassic theorist such

as Robbins and characterizes institutional theory of the economy 'as an open system in continuous interaction with a more comprehensive social political as well as physical system from which economic processes receive important organizing (and disorganizing) impulses and upon which they exert their own negative and positive influences' (ibid.p213). 'Thus innovation, sciences and technology as well as conflict of interests, power and coercion in economic and social life have therefore always been included in their (institutionalists') investigations' (ibid. p214). Further he emphasizes that the SCs of production as phenomena of 'environmental and ecological disruption (including the exhaustion of non-renewable stock resources)' (ibid. p215) could be analyzed only by the institutional approach based on the essential human collective needs and the ultimate aims of the minimization of human suffering (ibid.p227).

In this paper we can find another developed feature of his own methodology that is the acceptance of the entropic theory advocated by Nicholas Georgescu-Roegen. By pointing to the law of increasing entropy which means the excessiveness of unavailable materials and energy, Kapp attempts to unite SCs of the pre- and post- production processes such as duplication of artificial resources and overflowing of the industrial (and household) waste with SCs of the production process, such as air and water pollution. In this way our problematic issues concerning the consistency of his SCT might be resolved by introducing the concept of excessiveness, suggested by increasing invaluableness of waste materials and energy in affluent societies.

4-2. Evolution of Kapp's IEE

During 60's and the first half of 70's Kapp's IEE and SCT were amplified including his concepts of substantial social minima, CCC, irreversibility of ecological imbalance and so on, based on his research and experience in India (1961-62) and the Philippines (1964). We can study the validity of his IEE and SCT to the underdevelopment problems of poverty and deterioration of natural environment by reading his papers written in the middle of 60's (Kapp, 1965a and 1965b). Besides Kapp responds to the critique raised by Wolfgang Michalski (1965) and Wilfred Beckerman (1972), defending his concept of SCs (Kapp, 1972a).

Thereafter he develops the most progressive issues to orientate environmental policy in general, which are 'environmental goals, standards and indicators' derived from his theory of social minima formulated from his substantive viewpoint of environmental economics. This is firstly presented in a paper which is delivered at the Fourth International Conference of the Metalworkers' Union in Germany, which is entitled

'Environmental Disruption and Protection' (Kapp, 1972) and included in *Socialism and the Environment* edited by Ken Coates. In this paper he states that environmental goals 'have to be defined and must be built into economic system from outside, i.e. by society' and '(t)he result of such continuous process of ecological stock-taking should be expressed in form of environmental indicators' and formulated into 'environmental norms or standards as practical goals' (ibid.p18). And he insists that in social decision-making regarding environmental aims and environmental norms, the public participation and democratic process must be central (ibid.p22). Further he suggests that society has to redirect scientific research from 'the development of cleaning technique, filtering installation etc.' into 'an efficient use of raw materials and sources of energy both from the point of view of minimization of costs and the reduction of the volume of damaging waste product' (ibid. pp19-20).

Another progressive issue raised by Kapp is concerning direct and indirect controls for the achievement of 'environmental goals'. The former direct controls contain the immediate cessation of production of hazardous materials, the closure of existing hazardous production lines and industrial location regulation through licensing systems. Kapp points to cases that had already happened in Japan (ibid.p20), a country that he had visited to watch a few places deadly suffering by air and water pollution during his attendance at International Symposium on Environmental Disruption in the Modern World held in 1970 in Tokyo.

About the latter indirect control such as the introduction of pollution abatement equipments through incentives and/or legislation, Kapp writes '(i)ndustry may be compelled to set aside a percentage of total profit for the development of new and environmentally less dangerous technique' (ibid.p20). It is so much suggestive for us that industry could not seek the maximization of their profit as before even though it might be a significant rule. For example he mentions that in the US 'most pollution industry would face costs arising from environmental control at far less than 1% of their total production and only for the main polluters (paper and metal processing and chemical industries) is the percentage above 1%' (ibid.p21). Therefore quantitatively the profit maximization rules of industry may still exist and be predominant after the introduction of the pollution prevention legislations.

He later states that even if there is no incentive and/or legislation, industry might consider 'the negative environmental effects' exceptionally 'in those cases where alternative low impact technologies, location and output would actually be less costly or profitable' in his paper titled 'Environment and Technology' published after his death (Kapp, 1977, p532). Thus we may assume that when the technical costs of pollution

abatement are not so high (about 1% of the turnover) the extended hypotheses of 'pollution prevention pays' of Royston could be valid without no public regulations, only as far as it makes SCs, and the present costs of the business unit lower, and in this way the innovated technologies marketable. Here other problematic issues, whether anti-pollution equipments and their markets could be compatible with the world of profit maximization rules emerge.

Moreover, Kapp in his paper in 1972 refers to OECD's statistics about the investment of pollution prevention equipments (Kapp 1972b, p24), where he seems to recognize that some kind of those equipments had already been invented, developed and defused voluntarily or enforced by any urgently established institutional arrangements in developed countries. Curiously in his papers written later he does not refer to the OECD's 'polluter pays principle (PPP)' agreed by its member countries in 1972 at all. We can recognize that the aim of this principle contains the prevention of 'environmental dumping' and the subsequent trade distortions caused by exporters who tend to neglect SCs of production such as, for example, air and water pollution. However it is a little bit mysterious for us why he did not refer to PPP. Because we know Kapp had started his scholarly life with the dissertation on foreign trade and economic planning. So we could assume that this principle was along the line with Kapp's own Report and Working Papers of a Panel of Experts convened by the Secretary General of the UN Conference on the Human Environment' held June 4-12 in 1971(Kapp, 1983). There is no reason for our guess but certainly his report contained important features to implement environmental policies responding to the call for 'new international and in fact world-wide laws of environmental safeguards and protection'. And they contain the elimination of "a case of concealed price dumping" caused by 'different laws of environmental protection and environmental standards in different countries' (Kapp, 1972, p123 (Ullmann, 1983, pp138-139)). However this mystery will unfortunately still be pending after his sudden death in 1976.

In addition we have to emphasize here that Kapp could caution about the increasing 'content of carbon dioxide in the atmosphere' (Kapp, 1970b, p837) so early. And he continued to caution about '(a)ltering the chemical composition of the atmosphere' and 'giving rise to climate change' which in turn read to a call for 'establishing national and international monitoring system'(Kapp, 1977, p529).

5. Acceptance and Succeeding Development of Kapp's IE and IEE after 1976

5-1. Acceptance of Kapp's IE and IEE

As mentioned above, we may rationally assume that OECD might accept almost all proposals of Kapp's report prepared for UN Conference in 1972 for the reasons below. This report contains not only the explanation of the concepts of 'environmental goals', 'environmental standards' and 'environmental indicators', but also he examines comparatively the political means of social controls, such as less-effective indirect one (i.e. subsidies and taxes or penalties) and effective direct ones (i.e. prohibitions and curtailment) (Kapp, 1972, p113-115). Further he expresses urgent needs to develop 'alternative technologies and new technique' for abatement of pollution (ibid. p116) and to set up 'new administrative environmental agencies' (ibid. p119), which implements environmental, technology and location assessment, and environmental education for all levels, makes administrative, civil and criminal laws and damage compensation or liability laws for environment. Of course, these are based on the establishment of 'a constitutionally guaranteed right' to sound environmental conditions 'as part of other fundamental rights' (ibid. p123). We can understand that all the above orientation for OECD policies suggested by Kapp would be reflected in the succeeding environmental policy-making processes of almost all developed countries. While OECD countries introduced many environmental measures of direct regulation during the 70's by introducing subsidies and observing PPP, they gradually recommended and prepared other indirect or financial measures such as environmental taxes as a result of the eclipse of Keynesian economic policies by stronger governments and the revival of neoclassic or neo-liberalist economics and their policies. Nevertheless even from this period to today Kapp's SCT seemed to be well functioning like an undercurrent of the fundamental social minima and environmental regulations in OECD countries.

In 1982 Japan proposed United Nations Environment Programme to constitute a special committee on the strategy of global environment protection towards the 21 century. The World Commission on Environment and Development was then established and published "Our Common Future" in 1987. In the US the International Society for Ecological Economics was founded in 1989 by researchers and economists, for example, Herman Daly who was influenced by Georgescu-Roegen with his thermodynamics theory and considering ecology as fundamental bases for economic analysis. But this brand-new trend of anti-neoclassical economics on environmental issues was not so much influenced by the very tradition of institutional approaches, which were developed from Veblen via Myrdal to Kapp. Moreover E. Ostrom independently developed her own political economics on 'commons preservation' which was presented in her books titled 'Governing the Commons' in 1990 and D. Bromley also

stood alone to develop his 'Environment and Economy' published in 1991, which was based on the theoretical framework of J.R. Commons from his book 'Law and Capitalism' by. At the same time institutionalists began to reexamine Kapp's SCT and preceding theorists who were influential to its establishment (Swaney and Evert, 1989). The Eco-Management and Audit Scheme (EMAS) was issued by the EU countries in 1993 supported by the brand new environmental thought named 'Ecological Modernization' which means 'Industrial Ecologism'. This scheme was a voluntary one for the business world to realize 'sustainable development' technologically in their own business domain by taking measures to strengthen Eco-Management, -Accounting and -Communication with their stake holders. We can point out that these trends were characteristic for the EU countries whose traditional political situation is characterized by two large political parties i.e. the conservative and the labor, but whose new political trends of the small green (environmentalism) and neo-liberalism is added to the old mixture of conservatism and unionism. On the basis of those situations Peter Söderbaum emerged as a very European Institutional Environmental Economist who takes over the tradition of Myrdal's and Kapp's theories on economy, development and environment.

Here we can refer to one of the most meaningful and advanced features of Söderbaum's theory of IE and IEE today, which is his original concept of economic agents, such as Political Economic Organization (PEO) with Missions and Political Economic Person (PEP) guided by Ideological Orientations. These two new 'real types' of economic agents substitute not only old 'ideal type' of 'economic man' of neo-classics, but also 'Institutional Man' which was Kapp's brand new 'ideal type' in his IE and IEE. We assume Kapp was looking for his 'real types' which could be utilized as analytical tools in research on his IE and IEE, but he could not find any actual firms, which voluntarily declared their environmental goals and pursued them, and further did review the achievement of their performance and report about it openly for their stakeholders. As for Söderbaum's PEO, it is suggestive that if their missions, for example, towards environmental protection, social inclusion and stable employment are deliberately preferred, then their theoretically premised goal of profit maximization has to be in a trade off relation with other aspects of their missions.

We might assume that Kapp similarly was waiting for the emergence of real persons as PEPs, such as the green consumers who prefer ecologically friendly goods and services rather than mere cheap and convenient ones. However he could not find them at all during 1960's to early 70's. Unfortunately, for Kapp we recognize the out brake of green consumerism only in the 1980's⁽²⁾.

Even today there remain not only the traditional SCs phenomena such as air and water pollution in the developing countries but also SCs caused by hazardous waste in the developed countries. Therefore Söderbaum's real type of PEOs can be useful to overcome those problems voluntarily as pioneers or promoters in developed countries but will not be prevailing so fast in developing countries. However, as far as they would voluntarily decide their own environmental goals, standards and indicators stricter than official social minima and observe them gradually, then they consciously or unconsciously would contribute as policy makers to the realization of sustainable development of the society. As for PEP their increase in societies could have repercussion to the green PEO and might encourage them towards sustainable development in a step by step fashion.

Finally, we can refer to the Japanese acceptance of Kapp's IE and IEE. The first version of SCT was translated and published in 1959 when air and water pollution was badly spread in industrial areas all over the country. But the actual acceptance of his practical attitudes towards the pollution problem had only started at the time of his invitation by Shigeto Tsuru to the International Symposium on Environmental Disruption in the Modern World held in Tokyo 1970. Tsuru was taught by J. A. Schumpeter at Harvard University before the Second World War and famous for being a progressive economist very interested in environmental problems. After the meeting at the Symposium, Kapp and Tsuru were cooperating theoretically and practically in the field of environmental economics and policies. Tsuru wrote a book titled "Institutional Economics Revisited" in 1993 and introduced Kapp with his respect for him and another book entitled "The Political Economy of the Environment" in 1999, which is one of the best presentations of IEE even now but unfortunately he died in 2006.

In 1975 Kapp's papers on environmental issues were edited, translated and published by T. Shibata and M. Suzuki and in 1981 his papers on methodology and institutionalism were published by T. Shibata and K. Saito. However in the Japanese Society for Environmental Economics and Policy Studies established eventually in 1995, there are not so many researchers influenced by Kapp's SCT and his institutionalism, and this group does not yet have their own Journals. Today younger researchers participating in the Society are almost all main stream or neo-classical environmental economists, but successors of Kapp's legacy in some predominant universities are still influential and in positions to advise younger researchers. We are convinced that the further advancement of Kapp's SCT and the more applicable development of it is needed to improve the recent environmental situation which seems to be unsustainable.

6. Closing remarks

In the preceding description we can find a root source of Kapp's SCT in his early inquiry and his interests in human substantive needs for security, health and nutrition before the Second World War. His motives were further strengthened and found new objectives i.e. social costs phenomena, which were accompanied with the rapid economic growth of post war time in the US where he was a refugee from Germany after 1937. In those days Kapp had close relations with an intellectual circle of Frankfurt School and was influenced by their critical theory. His first version of SCT issued in 1950 became naturally a critique against the formal economic approach to SCs of neoclassical economists like Pigou, who diagnosed and prescribed phenomena based on the divergence between private costs and social costs, which occurred in the situation of air and water pollution, depletion of natural resources and other welfare degrading phenomena. Against Pigou's way of thinking, Kapp tried to establish a new political economy which focuses on substantive imbalance, disequilibrium or inefficiency of the market system but he was not satisfied with his first attempt in the form of a new 'Critical Welfare Economics'. Then he started to reexamine the methodology of social sciences and the history of economic theories. The former was mainly a reconsideration of Max Weber's methodology, which referred to the strict distinction between 'formal rationality' and 'the substantive' and between 'the economic' and 'the non-economic', further which advocated 'the ideal type' and 'the value neutrality' as the prerequisite conditions of social scientific inquiry. And after his reflection of the theory of economics Kapp regarded the philosophical bases of the neoclassical theory of economics as hedonistic utilitarianism and the Keynesian's as a type of imbalance or disequilibrium theory paying attention to CCC (circular cumulative causation) of monetary economic phenomena. At the same time he studied profoundly some theories of contemporary institutional economists such as G. Myrdal, K. Polanyi and Galbraith, which became the theoretical catalysts for his own SCT.

In 1963 the second version of Kapp's SCT, SCBE, eventually emerged as an institutional substantive economics featuring IEE. In this version he analyses environmental disruption, natural and human resource depletion and inefficient duplication of human and artificial resources by using institutionalists' concepts of CCC, irreversibility, embeddedness of economy into society and nature, dependence effect etc. Then he points out the existence of a 'critical zone' of ecological balance between human and nature and demonstrates the substantive social minima for survival as the fundamental criteria for human welfare, measurement tools of SCs and the bases of environmental policies or

decision-making. Since then he gradually focused his intellectual attention on environmental problems which were expanding and being more serious all over the world.

In the beginning of the 1970's Kapp was aggressively involved in international events to tackle environmental deterioration for example in International Symposium on Environmental Disruption held in Tokyo in 1970 and United Nations Conference on the Human Environment held in Stockholm in 1972. Especially in the latter case one can assume that Kapp could contribute with his repeated reference to 'environmental dumping' which suggests the needs for the agreement on the 'PPP' by OECD countries. As mentioned above, some theoretical problems remain for his SCT such as the reintegration of the SCs concept to be able to take account of the internalized SCs as to the payment for prevention, recovery and compensation by polluters. Further while his 'ideal types' to analyze the causes of actual environmental disruption are still 'profit maximizing firms' and 'utility maximizing consumers', his alternative 'ideal types' to advance his institutional economics theoretically is presented as 'institutional man'. Now we can find that this inconsistency might be overcome in 1980's by the actual appearance of the business enterprises shouldering CSR activities and green consumers' who express their preference for ecological goods in the markets. Then theoretically Kapp's dilemma could be resolved by Söderbaum's 'real types' of the economic agents such as PEO with mission and PEP with ideological orientation. If Kapp survived more decades he himself could accomplish these remaining tasks to develop his IEE further.

In closing this paper we may insist that just as Kapp repeatedly returned to reexamine Weber's methodology and the history of economic theories we can benefit from returning Kapp's methodology and the history of economic ideas including those of Kapp to develop our IE and IEE further.

Note

(1) The contents of the manuscript are composed of the below. Introduction, I. Intellectual Antecedents of Institutional Economics, II. The Nature and Significance of Institution, III. Towards a Theory of Institutional Change, IV. The Institutional Theory of Humane Conduct and Economic Behaviour, V. Towards A Theory of Humane Needs, VI. The Institutional Concept of Capital and the Theory of Capital Formation, VII. The Interaction between Technology and Business Enterprise, VIII. Technology and Economy, IX. The Multi-Sector Economy and the Theory of Economic Domination. (Heidenreich,

1994, pp208-209)

(2) We can remember The Body Shop was established in 1975 and Green Consumer Guide was published in 1988.

Reference

Beckerman Wilfred (1972) 'Environmental policy and the challenge to economic theory', Ignacy Sacks ed. *Political Economy of Environment: Problems of Method*, Paris and The Hague

Berger Sebastian and Elsner Wolfram (2007) *European Contributions to Evolutionary Institutional Economics: The cases of 'Cumulative Circular Causation' (CCC) and 'Open Systems Approach' (OSA): Some Methodological and Policy Implications*, *Journal of Economic Issues* Vol. X L I No.2 529-537

Berger Sebastian and Forster Mathew (2007) 'Toward a Political Institutional Economics: Kapp's Social Costs, Lowe's Instrumental Analysis, and the European Institutional Approach to Environmental Policy', *Journal of Economic Issues* Vol. X L I No.2 539-546

Berger Sebastian (2008) 'Circular Cumulative Causation (CCC) á la Myrdal and Kapp : Political Institutionism for Minimizing Social Costs', *Journal of Economic Issues* Vol. X L II No.2 1-9

Galbraith J.K.(1952) *American Capitalism*, New American Library, New York

Heidenreich Regine (1994) *Ökonomie und Institutionen Eine Reconstruction des wirtschafts- und Sozialwissenschaftlichen Werks von K.W.Kapp*, Peter Lang, Frankfurt am Main

Heidenreich Regine (1998) 'Economics and Institution: The Socioeconomic Approach of K. William Kapp', *Journal of Economic Issues* Vol. X X X II No.4 965-983

Horkheimer Max(1939) 'The Social Function of Philosophy' *Studies in Philosophy and Social Science*, VIII 322-337

———— (1947) *Eclipse of Reason*, Oxford University Press, New York

Kapp K. W. (1936) *Planwirtschaft und Aussen handel*, Georg & Cie, Genève

———— (1939) 'Economic Regulation and Economic Planning', *The American Economic Review*, Vol.29.No.4, pp760-773, New York Univ.

———— (1943) *Rational Human Conduct and Modern Industrial Society*, *Southern Economic Journal* Vol.10No.2, pp136-150

- (1950a) *The Social Costs of Private Enterprise*, Harvard University Press, Cambridge Massachusetts.
- (1950b) 'Political Economy and Psychology: The Survival of Hedonism and the Research Tasks of the Future', *Kyklos* IV-4 291-315
- (1954) 'Economics and Behavioral Science', *Kyklos* VII-3, 205-225
- (1957) 'Approach to the Integration of Social Inquiry: A Critical Evaluation', *Kyklos* X-4, 373-400
- (1959) River valley projects: Problems of Evaluation and Social Costs, *Kyklos* vol.12 no.4 in Kapp (1963) *Hindu Culture: Economic Development and Economic Planning in India*, Asia Publishing House, Bombay
- (1961) *Toward a Science of Man in Society*, The Hague Martinus Nijhof, Hague
- (1963a) *The Social Costs of Business Enterprise*, Asia Publishing House, Bombay
- (1963b) 'Social costs and Social Benefit — An Contribution to Normative Economics', R. v. Beckerath & H. Giersch (1963) *Probleme der normativen Ökonomik und der wirtschaftspolitischen Beratung*. Verein für Sozialpolitik, Berlin, Duncker & Humblot, also in Kapp (1963) *Hindu Culture: Economic Development and Economic Planning in India*, Asia Publishing House, Bombay
- (1965a) 'Economic Development in a New Perspective: Existential Minima and Substantive Rationality', *Kyklos*, x v III(1) 49-79
- (1965b) 'Social Costs in Economic Development', in G.P. Sicat et al. (ed.), *Economics and Development: A Introduction*, University of Philippines Press, Quezon City
- (1965c) 'Social Economics and Social Welfare Minima', in T. K. N. Unnithan et al.(ed.), *Sociology of Culture in India*, Prentice-hall of India, Dew Delhi
- (1967) 'Zum Problem der Enthumanisierung der reinen Theorie und der gesellschaftlichen Realität', *Kyklos* X X No.1 pp307-330, On the Problem of the Dehumanization of "Pure Theory" and Social Reality, translated by J.E.Ullmann and J. Cartwright in K.William Kapp (1985) *The Humanization of the Social Sciences*, edited by J.E. Ullmann and Roy Preiswerk, University Press of America pp73-97
- (1968a) 'In Defense of Institutional Economics', *Swedish Journal of Economics*,

vol.70.no.1pp.1-18

- (1968b) 'Nationalökonomie und Rationaler Humanismus', *Kyklos* Vol.X X I , No.1 pp1-24, 'Economics and Rational Humanism', translated by J.E.Ullmann and J. Cartwright in K.William Kapp (1985) *The Humanization of the Social Sciences*, edited by J.E. Ullmann and Roy Preiswerk, University Press of America pp.99-120
- (1969) 'On the Nature and Significance of Social Costs' *Kyklos* x x II (2) pp334-347
- (1970a) 'Environmental Disruption: General Issues and Methodological Problems', *Social Science Information* 9(4) 15-32, and in Edited by Shigeto Sturu(1970), *Proceedings of International Symposium on Environmental Disruption: A Challenge to Social Scientists*, Tokyo
- (1970b) 'Environmental Disruption and Social Costs: A Challenge to Economics', *Kyklos*, x x III (4),833-848
- (1971a) *The Social Costs of Private Enterprise*, Schocken Books,New York: Introduction to the 1971 Edition
- (1971b) 'Implementation of Environmental Policies', United Nations Conference on the Human Environment, in *Social Costs, Economic Development and Environmental Disruption* edited by J. E. Ullmann 111-142. Lanham, University of America Press, New York, London
- (1972a) 'Social costs, neo-classical economics, environmental planning: A reply', *Social Science Information* 11 (1) 17-28
- (1972b) 'Environmental Disruption and Protection', in Coates Ken edited, *Socialism and the Environment*, Spokesman, Nottingham
- (1976a) 'The Open-System Character of the Economy and its Implications', in Kurt Dopfer ed. (1976) *Economics in the Future*, Macmillan Press, London
- (1976b) 'The Nature and Significance of Institutional Economics', *Kyklos* vol.29,no.2, pp209-232 in J.E. Ullmann &R.Preiswerk (1985) *The Humanization of The Social Sciences*, University Press of America, Boston)
- (1977) 'Environment and Technology: New Frontiers for the Social and Natural Sciences', *Journal of Economic Issues* vol.11 no.3
- (1977)'Development and Environment: Towards a New Approach to Socioeconomic and Environmental Development', in Rolf Steppacher et,

- al.,(1977) Economics in Institutional Perspective, Lexington Books, Toronto.
- (1987) Für eine ökosozial Ökonomie, Fischer Taschenbuch Verlag, Frankfurt am Main
- (2011) The Foundations of Institutional Economics, Edited by Sebastian Berger and Rolf Steppacher, Routledge, London and New York
- Keynes J.M. (1926) 'The End of Laissez Faire' in the collected Writings of John Maynard Keynes Vol.IX, Macmillan and St. Martine's Press
- Michalski Wolfgang (1965) Grundlegung Eines Operationalen Konzepts Der Social Costs, J.C.B.(Paul Siebeck), Tübingen
- Omori Masayuki (2006) The Establishment and Development of Cambridge Environmental Economic Thought, Discussion paper No.16, Environmental Economy and Policy Research, University of Cambridge, Department of Land Economy Discussion Paper Series
<http://www.landecon.cam.ac.uk/RePEc/pdf/200619.pdf>
- Özveren Eyüp (2007) Where Disciplinary Boundaries Blur: The Environmental Dimension of Institutional Economics, in Ioannides Stavros and Nielsen Klaus ed. (2007) Economics and the Social Sciences, Edward Elgar,pp185-212
- Royston M.G. (1979) Pollution Prevention Pays, Pergamon Press, Oxford
- Swaney James A. and Evert Martin A. (1989) 'The Social Cost Concept of K. William Kapp and Karl Polanyi', Journal of Economic Issues Vol. XXIII No.1 7-33
- Söderbaum Peter (2000) Ecological Economics, Earthscan, London
- (2008) Understanding Sustainability Economics, Earthscan, London
- Veblen Th. (1932 [1994]) 'Absentee Ownership and Business Enterprise in Recent Times', in the Colected Works of Thorstein Veblen vol. IX , Rutledge/Thoemmes press
- [1933 [1994]] 'The Engineers and the Price System', in the Colected Works of Thorstein Veblen vol.VII, Rutledge/Thoemmes press
- Weber Max (1904 [1968]) Gesammelte Aufsätze Zur Wissenschaftlehre, J.C.B Mohr,Tübingen
- (1922 [1956]) Wirtschaft und Gesellschaft: Grindriss der Versteheneden Soziologie, 1 halbband , J.C.B Mohr,Tübingen
- Wolfram Elsner etal. (2006) Social Costs and Public Action in Modern Capitalism, Routledge, London